

Longitudinal and Transverse Mode Effects in the DARHT II Injector*

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The electron beam injector for the second axis of the Dual-Axis Radiographic Hydrotest Facility (DARHT II) is being commissioned at Los Alamos National Laboratory. The injector geometry affects the electron beam longitudinal dynamics as well as the transverse dynamics of the beam centroid. We will report on frequency-domain and time-domain (longitudinal and transverse) electromagnetic mode calculations for the injector using the MAFIA code, and resonant modes obtained through a circuit analysis; we will also report on damping of unwanted modes with electrical elements.

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